IN THE CLAIMS:

Please cancel claim 16 without prejudice, amend claims 1, 10, 14, 15 and 17, and add new claims 19 to 26 as follows:

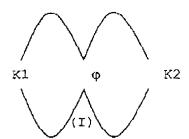
1. (currently amended) A solid state p-n heterojunction consisting of a an n-type semiconductor in the solid state, a ptype semiconductor in the solid state and of a sensitizing semiconductor, said sensitizing semiconductor being located at an interface between said n-type semiconductor and said n-type semiconductor, said p-type semiconductor being in the solid state, said sensitizing semiconductor consisting of individual particles adsorbed at the surface of said n-type semiconductor, said individual particles being quantum dots, with a plurality of individual point-contact junctions between said quantum dots and said n-type semiconductor on one hand and between said quantum dots and said p-type semiconductor on the other hand.

Claims 2-5 (canceled)

- (previously presented) A heterojunction as claimed in claim 1, characterised in that said n-type semiconductor is a ceramic made of finely divided large band gap metal oxide.
- (previously presented) A heterojunction as claimed in claim 1, characterised in that said n-type semiconductor is nanocrystalline TiO2.

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- 8. (previously presented) A heterojunction as claimed in claim 1, characterised in that said p-type semiconductor is an inorganic hole transporting solid compound.
- 9. (previously presented) A heterojunction as claimed in claim 1, characterised in that said p-type semiconductor is an amorphous reversibly oxydisable organic or organimetallic compound.
- 10. (currently amended) A heterojunction as claimed in claim 1, characterised in that said hole-wenductor p-type semiconductor is a polymer.
- 11. (previously presented) A heterojunction as claimed in claim 1, characterised in that said p-type semiconductor is selected from the group consisting of Spiro and Heterospirocompounds of general formula (I),



wherein ϕ is one of C. Si. Ge or Sn. and Kl and K2 are independently one from the other conjugated systems.

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- 12. (previously presented) A heterojunction as claimed in claim 11, wherein said p-type semiconductor is OMeTAD.
- 13. (previously presented) A heterojunction as claimed in claim 1, wherein said quantum dots are particles consisting of PbS, CdS, Bi₂S₃, Sb₂S₃, Ag₂S, InAs, InP, CdTe, CdSe or HgTe or solid solutions of HgTe/CdTe or HrSe/CdSe.
- 14. (currently amended) A solid state sensitized photovoltaic cell comprising a solid state p-n heterojunction as claimed in claim 1 consisting of an n-type semiconductor in the solid state, a p-type semiconductor in the solid state and a sensitizing semiconductor, said sensitizing semiconductor consisting of individual particles adsorbed at the surface of said n-type_semiconductor, said individual particles being quantum dots, with a plurality of individual point-contact junctions between said quantum dots and said n-type semiconductor and between said quantum dots and said p-type semiconductor.
- 15. (currently amended) A cell as claimed in claim 14, characterised in that it comprises
 - a transparent first electrode,
 - a said solid state p-n heterojunction and
- a second electrode, and further comprises a dense semiconductive layer between said first electrode and said solid state p-n heterojunction.

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16. (canceled)

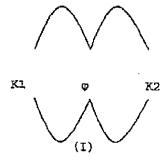
17. (currently amended) A cell as claimed in claim 14, characterised in that said solid state p-n heterojunction is obtained by forming quantum dots in the nanometer range on the surface of said n-type semiconductor by more than one deposition treatment and less than 10 deposition treatments, before providing said p-type semiconductor to said layered solid state p-n heterofunction.

18. (canceled)

- 19. (new): A solid state p-n heterojunction as claimed in claim 1, characterized in that said solid state p-n heterojunction is obtained by forming quantum dots in the nanometer range on the surface of said n-type semiconductor by more than one deposition treatment and less than 10 deposition treatments, before providing said p-type semiconductor to said solid state p-n heterojunction.
- A cell as claimed in claim 14, characterized in that said n-type semiconductor is a ceramic made of finely divided large band gap metal oxide.
- 21. (new): A cell as claimed in claim 14, characterized in that said n-type semiconductor is nanocrystalline TiO2.
- 22. (new): A cell as claimed in claim 14, characterized in that said p-type semiconductor is a polymer.

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- 23. (new): A cell as claimed in claim 14, characterized in that said p-type semiconductor is an amorphous reversibly oxydisable organic or organometallic compound.
- A cell as claimed in claim 14, characterized 24. (new): in that said p-type semiconductor is selected from the group consisting of Spiro and Heterospirocompounds of general formula (I),



wherein ϕ is one of C, Si, Ge or Sn, and K1 and K2 are independently one from the other conjugated systems.

- A cell as claimed in claim 14, wherein said p-25. (new): type semiconductor is OMeTAD.
- 26. (new): A cell as claimed in claim 14, wherein said quantum dots are particles consisting of PbS, CdS, Bi₂S₃, Sb₂S₃, Ag2S, InAs, InP, CdTe, CdSe or HgTe or solid solutions of HqTe/CdTe or HgSe/CdSe.

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